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BEFORE THE DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES
OF THE STATE OF MONTANA
HELENA, MONTANA

IN THE MATTER OF:

)
THE INVESTIGATION OF THE
ENVIRONMENTAL CONDITIONS
AT AND EMANATING FROM THE
MONTANA POLE AND TREATING
PLANT IN BUTTE, MONTANA
)

REMEDIAL INVESTIGATION/ FEASIBILITY STUDY ADMINISTRATIVE ORDER ON CONSENT

DOCKET NO. SF-90-00001

TO: ATLANTIC RICHFIELD COMPANY, a Delaware corporation, acting through its division ARCO Coal Company, authorized to transact business in the State of Montana through the ARCO Coal Company

Respondent.

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## BEFORE THE DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES OF THE STATE OF MONTANA HELENA, MONTANA

TO: ATLANTIC RICHFIELD COMPANY, a Delaware corporation, acting through its division ARCO Coal Company, authorized to transact business in the State of Montana through the ARCO Coal Company;

#### Respondent.

I.

#### JURISDICTION

This Remedial Investigation/Feasibility Study (RI/FS) Administrative Order on Consent (the "Consent Order") is issued pursuant to the authorities vested in the State of Montana ("State"), acting by and through its Department of Health and Environmental Sciences ("DHES"), by Montana Code Annotated ("MCA") §§ 75-10-711, and 75-10-715.

II.

#### **DEFINITIONS**

Words used in this Consent Order are to be taken and understood in their natural and ordinary sense unless this Consent Order indicates that a different meaning was intended.

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- A. "CECRA" means the Comprehensive Environmental Cleanup and Responsibility Act, codified at MCA §§ 75-10-701 to -724 (1989).
- B. "Consent Order" shall mean this document together with all attachments hereto and appendices incorporated herein.
- C. "Contractor" shall mean the company or companies retained by, or on behalf of, Respondent to undertake and complete the Work or any part thereof. A Contractor, and any subcontractors retained by the Contractor, shall be deemed to be related by contract to the Respondent.
- D. "Day" shall mean calendar Day, unless business Day is specified. Any deliverables, notices or other written documents that under the terms of the Consent Order would be due on a Saturday, Sunday or State of Montana holiday (as identified by the Governor or by state law) shall be due on the following business Day.
- E. "DHES" means the Montana Department of Health and Environmental Sciences.
- F. "Dispose" or "Disposal" means the discharge, injection, deposit, dumping, spilling, leaking, or placing of any Hazardous or Deleterious Substances into or onto the land or water so that the Hazardous or Deleterious Substances may enter the environ-

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ment or be emitted into the air or discharged into any waters, including ground waters.

- G. "EPA" means the United States Environmental Protection Agency.
- H. "Facility" means the Montana Pole National Priority List site, located at 220 Greenwood Avenue in Butte, Silver Bow County, Montana, in the southern 1/2 of Section 24, and the SE 1/4 of Section 23, T3N, R8W. The Facility includes the remaining plant facilities, on-site storage buildings (pole barns) and contents, oil recovery system, and soils, surface water and ground water where contaminants associated with the operations of the Montana Pole and Treating Plant facility have come to be located.
- I. "Fund" shall mean the Environmental Quality Protection Fund established in MCA § 75-10-704.
  - J. "Hazardous or Deleterious Substance" shall mean:
  - 1. a substance that because of its quantity, concentration, or physical, chemical, or infectious characteristics may pose an imminent and substantial threat to public health, safety, welfare or the environment and is:
    - a) a substance that is defined as a hazardous substance by Section 101(14) of the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. 9601(14), as amended;
      - b) a substance identified by the administrator of

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the United States Environmental Protection Agency as a hazardous substance pursuant to Section 102 of CERCLA, 42 U.S.C. 9602, as amended;

- c) a substance that is defined as a hazardous waste pursuant to Section 1004(5) of the Resource Conservation and Recovery Act of 1976, 42 U.S.C. 6903(5), as amended, including all substances listed or identified in 40 CFR 261; or
  - d) any petroleum product.
- K. "NCP" means the National Oil and Hazardous Substances
  Pollution Contingency Plan, 40 CFR, Part 300.
- I. "Project Coordinator" shall mean the individual or individuals appointed as the State's Project Coordinator(s) by DHES, whose duties are described in Section XV of this Consent Order.
- M. (the) "Parties" collectively, shall mean the State of Montana, acting by and through DHES, and the ARCO Coal Company.
- N. "Release" means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing of any Hazardous or Deleterious Substances into the environment.
- O. "Respondent" shall mean the Atlantic Richfield Company, a Delaware corporation, acting through its division the ARCO Coal Company. The term "Respondent" shall include ARCO's successors and assigns and all persons acting with or through

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ARCO's authority and in ARCO's behalf, including ARCO's officers, directors, principals, employees, and agents, in their respective capacities where such persons otherwise meet the definitions of "owners" and "operators" under CECRA.

- P. "Supplemental Work Plan" shall mean any Work Plan to be performed under the Additional Work Section, Section XI. Supplemental Work Plan(s) shall become attached and incorporated into this Consent Order.
- Q. (the) "Work" shall mean all investigations, sampling, and other mitigative actions prescribed by this Consent Order, including any Work Plans, and any schedules or plans established by the terms of this Consent Order.
- R. "Work Plan" means the plan to perform the Work developed jointly by the Respondent and DHES, which is attached hereto and incorporated herein as Attachment 1 to this Consent Order.

III.

#### FINDINGS OF FACT

The State of Montana, acting by and through DHES, has made the following Findings of Fact concerning the Montana Pole site:

A. Respondent ARCO is a corporation currently organized under the laws of the State of Delaware, with its corporate headquarters in Los Angeles, California. Respondent ARCO does business in the State of Montana. ARCO was the record owner of portions of the land upon which the Facility is situated from

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1910 to 1958. During a portion this time, from 1946 to 1958, Respondent leased said property to Torger Oaas and the Montana Pole and Treating Plant and subsequently sold said property to Montana Pole and Treating Plant.

- B. Torger and Martha Oaas, residing on Greenwood Avenue, owned and operated the Montana Pole and Treating Plant from 1946 to May 17, 1984. The Oaases were in control of, and had responsibility for, the property during operation of the Facility.
- C. The Montana Pole and Treating Plant is located at 220 Greenwood Avenue in Butte, Silver Bow County, Montana, in the southern 1/2 of Section 24 and the SE 1/4 of Section 23, T3N, R8W. The Facility includes approximately 45 acres. A map of the site is attached as Attachment 5.
- D. The Facility includes associated real property, remaining foundations, drainage channels, tanks and storage barns. It includes all soils, surface water and ground water at or adjacent to the Facility where a Hazardous or Deleterious Substance associated with the operations of the Montana Pole and Treating Plant has been Released, deposited, stored, Disposed of, placed or otherwise come to be located.
- E. Respondent ARCO owned a portion of the real property on which the Facility is located during the first twelve (12) years of Facility operation. During that time, hazardous substances were Disposed of on site in such a way that they were

Released into the environment.

- F. Bank of Montana Butte received a deed in lieu of foreclosure to a portion of the Facility on May 17, 1984.
- G. Surface soils in the area where the Facility was located are visibly contaminated. In addition, approximately ten thousand (10,000) cubic yards of soil and sludge were excavated, bagged and stored in pole barns on Facility property by EPA as part of a removal action conducted in 1985.
- H. The 1985 removal action conducted by EPA consisted of the installation of wells adjacent to Silver Bow Creek to intercept contaminated ground water prior to its entering Silver Bow Creek. Floating product is removed from the extracted ground water through an oil/water separator and the remaining ground water is reinjected on site through infiltration galleries. The State of Montana did not participate in the design or installation of the ground water system. EPA operated the system until September, 1988 when the State took over its operation. The State has not modified the design of the system since it assumed responsibility for its operation.
- I. A fire at the facility in May, 1969 caused a heavy fuel oil storage tank to rupture, causing the release of an unknown quantity of diesel fuel, pentachlorophenol (PCP) and creosote. Significant spillage from a vat and both retorts was reported.
- J. Ground water under the Facility is contaminated with pentachlorophenol, polynuclear aromatic hydrocarbons and diesel

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fuel constituents. Floating product is present at the water table in some monitoring wells.

- K. Oil seeps are visible along the banks of Silver Bow Creek. Surface water samples from the creek showed concentrations of pentachlorophenol and diesel fuel.
- L. The oil recovery system designed to intercept oily product at the water table before it contaminated Silver Bow Creek recovered approximately six thousand (6,000) gallons of product between November, 1986 and December, 1988. This product is stored in tanks on Facility property.
- M. Pentachlorophenol and creosote are Hazardous or Deleterious Substances as defined by MCA § 75-10-701(6). Sludge and tank bottoms are listed K001 RCRA wastes pursuant to 40 CFR 261.32.
- N. Dioxins and furans are known contaminants of pentachlorophenol and have been identified in samples from the Facility. These constituents are Hazardous or Deleterious Substances as defined by MCA § 75-10-701(6).
- O. Petroleum products are a Hazardous or Deleterious Substance as defined by Section 75-10-701(6), MCA.
- P. Polychlorinated Biphenyls (PCBs) are defined as a Hazardous or Deleterious substance pursuant to MCA § 75-10-701(6).
- Q. Pentachlorophenol (PCP) is a Hazardous or Deleterious Substance that can cause damage to the human liver, kidney,

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nervous system, and immune system with chronic exposure. PCP has been demonstrated to cause cancer in animals.

- R. Creosote is a Hazardous or Deleterious Substance as defined by MCA § 75-10-701(6) and contains polynuclear aromatic hydrocarbons (PAH) which are Hazardous or Deleterious Substances as defined by MCA § 75-10-701(6). Some PAHs are known carcinogens.
- S. Diesel fuel contains toluene, xylene, benzene, and ethylbenzene, which are considered Hazardous or Deleterious Substances. Benzene is considered a human carcinogen.
- T. Actual and potential routes of exposure to PCP, dioxin, PAHs, diesel fuel constituents, PCBs, dioxin, and other Hazardous or Deleterious Substances include direct human or animal contact through ingestion or dermal absorption of soil, sediment, surface water or ground water, and inhalation of the Hazardous or Deleterious Substances in air.
- U. Actual and potential routes of migration of Hazardous and Deleterious Substances include migration to ground water, surface water and air.

IV.

#### CONCLUSIONS OF LAW

Based on the preceding Findings of Fact and the administrative record, the State of Montana, acting by and through DHES and in consultation with EPA, has made the

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- A. Respondent is a "Person" as that term is defined by  $MCA \S 1-1-201(1)(b)$  and 75-10-701(9).
- B. The Montana Pole and Treating Plant and associated buildings, and all real property, including surface and ground water, where Hazardous or Deleterious Substances originating from the Montana Pole and Treating Plant have come to be located, is a "Facility" as that term is defined in MCA § 75-10-701(4)(a) or (b).
- C. ARCO owned or operated the Facility or property at the time of disposal of a Hazardous or Deleterious Substance as provided in MCA § 75-10-715(1)(b).
- D. Bank of Montana Butte was and is an owner or operator of the Facility at the time of a Release of a Hazardous or Deleterious Substance, as provided in MCA § 75-10-715 (1)(b).
- E. The Respondent is, and is hereby notified that it is found to be a liable Person under MCA Section 75-10-715(1).
- F. Pentachlorophenol, PAHs, PCBs, creosote and petroleum products are Hazardous or Deleterious Substances, as those terms are defined in MCA § 75-10-701(6).
- G. There have been Releases of Hazardous or Deleterious Substances at the Facility, and there exists a substantial threat of continued and future Releases of Hazardous or Deleterious Substances at the Facility that DHES has reason to believe may present an imminent and substantial endangerment to the

public health, welfare, or safety or the environment.

H. The information and remedial action required by this Consent Order is necessary and appropriate to identify the existence, nature, origin, and extent of the Release or the threat of Release and the extent and imminence of the danger to public health, welfare, safety, or the environment.

I. The Bank accepted a deed in lieu of foreclosure for part of the Facility from the Montana Pole and Treating Plant on May 17, 1984. The offer and acceptance of this deed served to transfer legal title to part of the Facility to the Bank. Though the Bank did not record this deed, the transfer qualified as a legal transfer. Therefore, the Bank currently holds title to the property.

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#### DETERMINATIONS

A. Based on the Findings of Fact and Conclusions of Law set forth above, the State of Montana, acting by and through DHES, and in consultation with EPA, has determined that the actions required by and undertaken pursuant to this Consent Order are necessary to protect the public health and welfare and environment, are in the public interest, are consistent with the NCP and State requirements, and are appropriate remedial actions to contain, remove and abate the past Release of Hazardous and Deleterious Substances and presently continuing Releases and

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threatened Releases of Hazardous or Deleterious Substances, into the environment at and from the Facility.

B. The Respondent is qualified to perform the actions set forth in this Consent Order properly and expeditiously.

VI.

#### TERMS AND CONDITIONS OF CONSENT

- A. In entering into this Consent Order, the Respondent and the State of Montana agree that the Respondent will conduct a Remedial Investigation (RI) and Feasibility Study (FS) for the purpose of:
  - 1. evaluating the nature and extent of contamination and impacts on the public health, welfare, safety or environment due to the Release of Hazardous or Deleterious Substances at the Facility in accordance with the Work Plan and Supplemental Work Plans; and
  - 2. identifying and evaluating alternatives for remediating contamination caused by the Release of Hazardous or Deleterious Substances at the Facility in accordance with the Work Plan and Supplemental Work Plans.
- B. The Parties agree and acknowledge that the development and performance of a Remedial Investigation (RI) and Feasibility Study (FS) will be conducted through the retention and direction of Contractors, in accordance with sound scientific, engineering and construction practices and shall be consistent with all

applicable federal and state laws and regulations. 1 Respondent has provided the State with information concerning 2 the technical qualifications of the persons and organizations 3 who have been designated by the Respondent to conduct the RI/FS 4 activities required by this Consent Order. 5 determined that Respondent's Contractors are qualified to 6 undertake the performance of the RI/FS. For any change by the 7 Respondent in the primary engineering and/or consulting firm or 8 its principal person in charge, the Respondent shall reaffirm 9 this ability to carry out the task by notifying the State in 10 writing of the name(s) of the engineering and/or consulting 11 firm(s) who will be responsible for carrying out the Work under 12 this Consent Order, and the principal person in charge of 13 conducting the Work for each such firm to be used in carrying 14 out such Work. 15 16

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- Respondent further completely and voluntarily waives its rights to, and agrees not to:
  - appeal the issuance of this Consent Order;
  - challenge the jurisdiction (or the essential facts which create jurisdiction) or authority of the State or DHES to enforce this Consent Order;

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The State has

3. contest the validity or enforceability of any and all provisions, terms, and conditions of this Consent Order including the Work Plan and any Supplemental Work Plans adopted pursuant hereto, except as provided for

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paragraph I of Section XX.

D. Subject to the provisions of paragraph C of this Section VI, nothing in this Consent Order shall be construed as an admission of liability by Respondent nor as a limitation, restriction or waiver of any arguments or challenges which Respondent may have regarding the proper interpretation or construction of the provisions, terms and conditions of this Consent Order and attachments hereto.

E. Moreover, Respondent's agreement to comply with the provisions, terms and conditions of this Consent Order does not constitute an admission or acknowledgment of the facts asserted or implied herein. This Consent Order shall not operate as an admission by Respondent as to any factual assertion or legal conclusions outside of the context of proceedings to interpret or enforce this Consent Order. Respondent specifically does not admit or acknowledge the Findings of Fact or Conclusions of Law contained in Sections III and IV above, except to the limited extent noted in Subsection C, above.

VII.

#### PARTIES BOUND

A. All Parties are bound by the terms of this Consent Order. Respondent agrees that no change in ownership or corporate status shall in any way alter the status or responsibility of the Respondent under this Consent Order.

Respondent shall be responsible for carrying out all actions required of Respondent by the terms and conditions of this Consent Order. Respondent shall be responsible for insuring that all Contractors, consultants, firms and other Persons or entities acting on behalf of Respondent with respect to matters included herein, will comply with the terms of this Consent Order.

VIII.

#### NOTICE

The State of Montana, acting by and through DHES, hereby notifies Respondent that DHES has determined that Respondent is a Person responsible for the Release(s) or threatened Release(s) of Hazardous or Deleterious Substances from the Facility. Moreover, Respondent is hereby notified by DHES that the Work required by this Consent Order, the attached Work Plan and any Supplemental Work Plans is the "appropriate remedial action" with regard to the Releases or threatened Releases at the Facility. Respondent is hereby notified that it may be required to reimburse the Fund for the costs of remedial actions, including enforcement actions, litigation costs, attorneys' fees and expert witness fees, taken or incurred by DHES either to implement itself, or to compel Respondent to implement an appropriate remedial action following its failure or refusal to do so, and the State may recover all costs incurred by the State in

connection therewith, including any punitive damages as set forth in MCA  $\S$  75-10-715(3).

IX.

#### ORDER

NOW, THEREFORE, RESPONDENT AGREES, AND DHES HEREBY ORDERS, pursuant to MCA §§ 75-10-711 and 75-10-715, Respondent to fully and timely comply with all of the terms, conditions and requirements of this Consent Order.

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## DEVELOPMENT AND EXECUTION OF WORK PLAN

A. Respondent is ordered and agrees to conduct an RI/FS for the Facility pursuant to the terms of this Consent Order. The Respondent shall conduct the RI/FS in accordance with CERCLA, the National Contingency Plan (NCP), applicable EPA RI/FS guidance (identified in Attachment 3, attached and incorporated herein), and applicable state law and regulation (attached and incorporated herein as Attachment 4). The Respondent shall conduct the RI/FS in accordance with the attached Montana Pole RI/FS Work Plan. The attached Work Plan is hereby incorporated into this Consent Order as an enforceable part hereof (Attachment 1). The Respondent shall also conduct the RI/FS in accordance with the specific activities and schedules for conducting RI/FS work set forth in the attached

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between the terms and conditions of this Consent Order, without reference to its attachments and appendices, and those contained in the Work Plan, and associated schedules, and attachments, or other documents incorporated herein, the terms and conditions of this Consent Order without reference to the attachments and appendices shall take precedence.

- B. In the eventuthat subsequent amendments to CERCLA, the NCP, applicable EPA RI/FS guidance, or applicable state laws or regulations are promulgated after the effective date of this Consent Order which materially affect the rights or obligations of either party with Prespect to the substantive nature of the Work to be performed in the RI/FS, the State and the Respondent agree to negotiate in good faith an amendment to this Consent Order to provide for such changes.
- C. The State, in consultation with EPA, shall prepare all necessary draft and infinal endangerment assessments, public health evaluations, and analyses of "Applicable or Relevant and Appropriate" federal and state standards, requirements, criteria and limitations (ARARs) required for the RI/FS work, and provide them to the Respondent in a timely manner for incorporation into the draft and final RI/FS reports as described below. The Respondent may submit a preliminary scoping document addressing endangerment assessment, public health evaluation, or ARARs issues to the State no later than one hundred eighty (180)

calendar Days after the effective date of this Consent Order. The Respondent agrees that no formal State response to the Respondent's documents is needed before draft State documents are published for public comment. The State shall use its best efforts to complete and deliver these reports to the Respondent within the time periods projected for completion and delivery in the RI/FS Work Plan. These projected time periods are estimates and are not binding upon the State. The State shall notify the Respondent as early as possible if the State intends to complete and deliver the reports before the dates projected in the Work Plan and Schedule, Attachments 1 and 2.

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- Respondent shall incorporate D. the endangerment assessment(s), public health evaluation(s) and ARARs analysis prepared by the State in the deliverables described paragraphs X.E through X.I below. Where Respondent disagrees with all or portions of the endangerment assessment(s), public health evaluation(s) or ARARs analysis prepared by the State, such disagreement shall not be expressed in the referenced The Respondent shall provide any comments or deliverables. objections concerning such documents separately, but not later than the public comment period described in Section XXIV. comments received from the Respondent, complete with responses provided by the state or federal government, shall be included in the administrative record.
  - E. Draft RI and Preliminary Draft RI/FS Reports: The

Respondent shall submit a draft RI report and a preliminary draft RI/FS report to the State for review and comment as provided in the Work Plan schedule. Upon receipt of the drafts, the State shall prepare and transmit comments to the Respondent concerning any necessary revisions to be made in the final draft RI/FS report before it is made available for public comment.

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Final Draft RI/FS Report: The Respondent shall revise the draft RI and preliminary draft RI/FS reports to address the State's comments and submit a final draft RI/FS report to the State for review and approval. Within thirty (30) days following receipt of the State's comments on the draft RI report and again within thirty (30) days following receipt of the State's comments on the preliminary draft RI/FS report, DHES shall hold meetings with the Respondent to review the State's Within thirty (30) days of the meeting on the preliminary draft RI/FS report, the Respondent shall submit the final draft RI/FS report. If the State disapproves the final draft RI/FS report, Respondent shall be notified in writing and the basis of the disapproval shall be specified. The dispute resolution procedures in Section XX shall apply to disputes arising from the State's disapproval. Respondent may cure the dispute and terminate the dispute resolution process by agreeing to the State's changes to the final draft RI/FS report at any time during the dispute resolution process.

If the State disapproves the final draft RI/FS report, the

State may complete the final draft RI/FS, and recover the costs of such an effort pursuant to federal or state law, upon a determination by the State, subsequent to the dispute resolution process, that the RI/FS is not being conducted properly and that the public interest can only be served by the State taking over the RI/FS process. Such a decision shall be in writing and shall be part of the administrative record.

- G. The State may make the draft RI report available to the public for review only, and shall make the final draft RI/FS report available to the public for review and comment for at least a thirty (30) day period.
- H. <u>Draft Final RI/FS Report</u>: Following the public review and comment period, the Respondent shall submit a draft final RI/FS report to the State within thirty (30) days of receipt of the State's directions for revision and completion. The Respondent shall adequately address or incorporate the State's comments and directions in the draft final RI/FS report.
- I. <u>Final RI/FS Report</u>: The Respondent shall have thirty (30) days after receipt of the State's comments on the draft final RI/FS report to submit the final RI/FS report to the State for review and approval. If the Respondent does not adequately respond to State comments in the final RI/FS report, the State may notify the Respondent in writing that the State disapproves the final RI/FS report. The dispute resolution procedures in Section XX, with the exception of the informal negotiation

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requirement, shall apply to disputes arising from the State's disapproval of the final RI/FS report based upon the failure of the Respondent to adequately respond to or incorporate the State's comments in the final RI/FS report.

Upon the conclusion of the dispute resolution process as described in Section XX, the Respondent shall comply with the decision that is rendered. Any failure on the part of Respondent to comply may result in the State preparing the final RI/FS. If the State completes the RI/FS pursuant to the provisions in this Section, the Respondent shall deliver to the State all records pertaining to the conduct of the RI/FS, except those records claimed by Respondent to be exempt by law from such disclosure, within twenty (20) Days of receipt of such notification from the State.

The State may also choose to enforce the terms of this Consent Order, and compel the Respondent to produce the final RI/FS consistent with the comments of the State.

J. The State and the Respondent will meet on a quarterly basis to discuss implementation of the Work Plan, including sampling, data, and reports.

XI.

# ADDITIONAL WORK

A. If additional investigations are determined by DHES to be necessary, DHES shall prepare a supplemental scope of Work

request in writing that the Respondent develop Supplemental Work Plan for the additional Work as soon as possible and no later than thirty (30) Days after such notification, and request in writing that the Respondent perform the additional Work. The supplemental scope of Work shall specify the basis and reasons for determining that additional Work is necessary. Prior to delivery of a supplemental scope of Work to the Respondent, the State shall provide the opportunity for a scoping meeting to discuss the form and substance of the Supplemental Work Plan. The Respondent shall respond in writing to DHES's request for additional Work, and if Respondent agrees to undertake the additional Work, a Supplemental Work Plan shall be prepared by the Respondent and submitted to the State for review and comment. The State shall provide one round of comments to Respondent which will be incorporated into the Supplemental Work Plan unless the dispute resolution process found in Section XX is invoked. The Supplemental Work Plan developed for that additional Work shall become incorporated into this Consent Order.

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B. If the Respondent does not agree to perform the additional Work and/or does not prepare an acceptable Supplemental Work Plan, it shall provide its rationale to DHES in writing. The State shall respond in writing to the Respondent's comments. If the State and Respondent cannot agree on the additional Work within thirty (30) Days of Respondent's

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receipt of the State's response, the dispute shall be subject to the dispute resolution process in Section XX. The Respondent hereby agrees to perform any additional Work within the scope of the original Work Plan which is determined, pursuant to the dispute resolution process, to be necessary. Any failure by the Respondent to perform additional Work within the scope of the original Work Plan shall be deemed to be a violation of this Consent Order. Any failure by the Respondent to perform additional Work outside the scope of the original Work Plan shall not constitute a violation of this Consent Order. For the purposes of this Section, "the scope of the original Work Plan" shall mean the investigation of contamination associated with the Facility, the approximate boundaries of which are shown in Figures 2-7 of Volume I of the Work Plan (Attachment 1), except that any investigation of organic contamination in Silver Bow Creek shall be limited to a distance downstream to the USGS gauging station located at the Interstate I 15/90 overpass. If organic contamination associated with the Mentana Pole site is found at this location, downstream investigations will be included as part of investigations associated with the Silver Bow Creek NPL site. If the Respondent does not perform the additional Work required of it following the conclusion of the dispute resolution process, it shall be subject to statutory penalties for each Day it fails to comply with the requirements of this Consent Order. In addition, the

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state reserves the right to conduct the RI/FS activities described in the supplemental scope of Work and/or pursue any other actions authorized by applicable state or federal law.

C. Respondent agrees that if contaminants are detected in the deep well to be installed pursuant to the Work Plan, an additional two deep wells will be installed and sampled without resort to the additional Work procedures described in paragraph XI.A. The locations for these two wells will be determined by the State following a meeting with the Respondent to discuss the appropriate well locations.

XII.

## SITE ACCESS AND SAMPLING

A. Respondent agrees to permit the State and its authorized representatives to have unrestricted access to portions of the Facility that may be owned or controlled by Respondent which are either impacted by Releases, or utilized to conduct any activities required by this Consent Order. Such grant of access shall be for the purpose of conducting, overseeing and inspecting any and all activities which have been or are being conducted or overseeing and inspecting conditions which are addressed under or impacted by the activities required to be undertaken pursuant to this Consent Order. Nothing herein shall limit or restrict any statutory inspection, site access, or sampling authorities vested in DHES by applicable federal or state law.

B. The Respondent hereby consents to observation by DHES representatives at any time during the performance of Work required under, performed in connection with, or undertaken in furtherance of the purposes of this Consent Order. The Respondent consents to DHES taking samples or split samples on any property owned or controlled by Respondent which is part of the Facility at any time at DHES's discretion.

- C. The Respondent shall notify the State not less than seven (7) days in advance of any sample collection activity to be conducted by the Respondent or its representatives at the Facility. Upon the request of the State, the Respondent shall provide split or duplicate samples to the State of any samples collected by or on behalf of the Respondent, provided that a sufficient quantity of materials to be sampled are available on the day of sampling. The procedures for collecting such split or duplicative samples will be the procedures set forth in the Quality Assurance Project Plan (QAPP) for the Montana Pole and Treating Plant Site, set forth as Attachment 6.
- D. To the extent access to property owned by third Parties is required in order for the Respondent to carry out the requirements of this Order, Respondent agrees to and shall use its best efforts to obtain access for itself and DHES. Any agreement must allow Respondent and DHES to sample or monitor environmental media, including the right to split samples, on property owned by third parties pursuant to the requirements of

the Consent Order and attached Work Plan. 1 consistent with its authority under MCA \$ 75-10-707, obtain 2 for the Respondent if the access Respondent 3 documentation to DHES demonstrating that it has used its best 4 efforts to obtain access on its own and failed to obtain access. 5 The Respondent agrees that it will reimburse the State for all 6 expenses not inconsistent with the NCP which the State incurs in 7 gaining access for the Respondent, at the request of the Respondent, and will indemnify the State as provided in Section

XXV of this Consent Order.

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When working on property owned by third parties, the Respondent shall provide the opportunity for the third party to request and obtain a split sample. The Respondent shall document that such an opportunity was provided.

The State shall,

The State shall notify the Respondent, orally or in writing, not less than seven (7) calendar Days in advance of any sample collection activity by or on behalf of the State. Upon the request of the Respondent, the State shall provide split or duplicate samples to the Respondent of any samples collected by or on behalf of the State at or in the vicinity of the property which is the subject of the Work Plans, provided that a sufficient quantity of the materials to be sampled is available The procedures for collecting such on the Day of sampling. split or duplicative samples will be the procedures set forth in the Quality Assurance Project Plan (QAPP) for the Montana Pole

and Treating Plant site, set forth as Attachment 6.

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#### XIII.

# COMPLIANCE WITH OTHER LAWS

All actions carried out by the Respondent pursuant to this Consent Order shall be done in full compliance with all applicable federal, state and local laws and regulations. Respondent shall be responsible for obtaining all federal, state or local permits which are necessary for the performance of any Work hereunder. Pursuant to the State's authority under MCA § 75-10-721(3), the State agrees to exempt all remedial actions conducted entirely on site pursuant to this Consent Order from State and local administrative procedural orpermit requirements, if necessary to complete the requirements of this Consent Order in a timely fashion.

#### XIV.

## QUALITY ASSURANCE/QUALITY CONTROL

- A. The Respondent shall comply with all approved quality assurance, quality control, and chain of custody procedures and requirements as they pertain to all sampling as set forth in the Quality Assurance Project Plan (QAPP) and the Laboratory Analytical Protocol (LAP) established under this Consent Order.
- B. Respondent, the State and their respective contractors and consultants shall cooperate and make available to each other

in monthly data reports a summary of site activities including the results of sampling and testing, and upon request other data generated by any of them or on their behalf, including raw data, field notes, data validation reports and any other relevant information in their possession regarding the actions called for by this Consent Order, except as exempt by law from such disclosure. Monthly data reports shall include data received during each calendar month and shall be due no later than the 15th day of the succeeding month.

- C. In order to provide quality assurance and maintain quality control with respect to all samples collected pursuant to this Consent Order, the Respondent shall:
  - 1. Arrange for access for DHES and its authorized representatives, upon reasonable notice to Respondent and during regular business hours, to any laboratories and personnel utilized by the Respondent for analyses;
  - 2. Ensure that all sampling and analyses are performed according to the methods set forth in the Sampling and Analysis Plans (SAPs) attached and incorporated herein as Attachment 7, the QAPP and the LAP established under this Consent Order;
  - 3. Ensure that any laboratories utilized by the Respondent for analyses prepare and maintain adequate documentation of compliance with the requirements described in XIV.C.2. (above) and that such documentation be made

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available to DHES and the Respondent upon request;

- 4. Ensure that any laboratories utilized by the Respondent for analyses participate in a quality assurance/quality control program equivalent to that which is followed by EPA under CERCLA. As part of such a program, and upon request by DHES, such laboratories shall perform such analyses of samples provided by DHES as are necessary to demonstrate the quality of each laboratory's analytical data.
- 5. Ιf Respondent utilizes laboratory a which participates in EPA's Contract Laboratory Program, paragraphs 1 and 4 of this Section XIV shall inapplicable.

XV.

# PROJECT COORDINATORS AND REPORTING

A. On or before the effective date of this Consent Order, the Respondent shall designate one or more Project Coordinators and alternate Project Coordinators. The State Project Coordinator will be Brian Antonioli, and the alternate Project Coordinator will be Karen Zackheim. The Project Coordinator for the Respondent will be Robert D. Montgomery. The alternate Project Coordinator for the Respondent will be William R. Williams. Each Project Coordinator shall be responsible for overseeing the implementation of this Consent Order. To the

maximum extent practicable, communications between the Respondent and the State, and all documents, reports, approvals, and other correspondence concerning the activities performed pursuant to or required by the terms and conditions of this Consent Order, shall be directed through the Project Coordinators. If the Project Coordinator is unavailable, such information shall be directed through the alternate Project Coordinator. During implementation of the Work Plans and any supplemental Work Plans, the Project Coordinators shall, whenever possible, attempt in good faith to resolve disputes informally through discussion of the issues.

- B. The State and the Respondent shall each have the right to change their respective Project Coordinators. Such a change shall be accomplished by notifying the other Party as soon as possible after making the change.
- C. The State Project Coordinator shall have, and may exercise, the authority vested in DHES by MCA §§ 75-5-621 and 75-10-712. In addition, he shall have the authority to immediately halt any activities at the Facility which are being or may be undertaken pursuant to this Consent Order, which violate, threaten to violate, or which cause or threaten to cause, a public nuisance or a violation of any requirements of applicable federal or state law, this Consent Order, or a Work Plan or Supplemental Work Plan established under this Consent Order.

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When the State Project Coordinator takes action under paragraph XV.C, the State Project Coordinator may orally direct a substantive change not inconsistent with the NCP to the requirements of the Work Plan. Such a change shall be followed up in writing by the State within three (3) business days of the oral direction. "Substantive change," for the purposes of this paragraph, shall be defined as any change that contradicts the written language in the Work Plan attached hereto, and any Supplemental Work Plans, provided, however, that any substantive change which substantially increases the cost to, or obligations of, the Respondent, other than substantive changes to address emergency conditions, shall be proposed as Additional Work under Section XI of this Consent Order. Such direction shall be subject to dispute resolution after receipt of written notice specified above, unless covered under the conditions described in Section XX.J. Once a final determination has been made pursuant to the dispute resolution process described in this Consent Order, the Parties agree to incorporate such change into this Consent Order by written amendment. Any substantive change ordered by the State Project Coordinator which affects the Schedule of activities set forth in Attachment 2, shall be treated as a Force Majeure event pursuant to Section XVI of this Consent Order. If dispute resolution procedures are not initiated within 10 business days of receipt by the Respondent of the written notice referenced in paragraph XV.D above, the

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a modification and shall become a fully enforceable part thereof.

written notice shall be incorporated into this Consent Order as

- E. The absence of the State Project Coordinator from the Facility shall not be cause for stoppage of the Work to be performed pursuant to this Consent Order.
- F. One copy of all plans, reports, notices and other Work products required under the terms of this Consent Order shall be sent by certified mail, return receipt requested, or equivalent service to each of the following:

Brian Antonioli
Solid and Hazardous Waste Bureau
Montana Department of Health and
Environmental Sciences
Cogswell Building, Room B201
Helena, MT 59620

Thomas L. Eggert, Esq.
Special Assistant Attorney General
Legal Division
Montana Department of Health and
Environmental Sciences
Cogswell Building, Room C216
Helena, MT 59620

Michael Bishop
U.S. Environmental Protection Agency
Region VIII
Federal Building
301 South Park
Helena, MT 59626-0096

- G. Except for initial oral notices specified in Sections XV.D., XVI.B. and XX.A., all notices given pursuant to this Consent Order shall be given in writing.
  - H. Copies of all plans, reports, notices and other Work

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products to be given to ARCO shall be sent to the following address:

> Robert D. Montgomery ARCO Coal Company 307 East Park Avenue, Suite 301 Anaconda, MT 59711

with copies to:

Jeffrey H. Desautels, Esq. ARCO Coal Company 555 Seventeenth Street, Suite 2000 Denver, CO 80202

and

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Linda L. Rockwood, Esq. Parcel, Mauro, Hultin & Spaanstra, P.C. 1801 California, Suite 3600 Denver, CO 80202

XVI.

#### FORCE MAJEURE

A. Failure of the Respondent to comply with the requirements of this Consent Order, including the Work Plan and Supplemental Work Plans shall be excused only to the extent such delay or failure of performance is caused by reasonably unforeseeable occurrence(s) beyond the control of the Respondent and which the Respondent could not have prevented, or avoided the exercise of due diligence, (hereinafter: Majeure"). Force Majeure shall include but not be limited to: Acts of God, war, revolution, riots, strikes, fires, or floods. Such circumstances also include, but are not limited to, delays or failures of governmental agencies in issuing necessary permits or approvals, provided such permits are required and the

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Respondent has timely submitted complete applications and provided all required information. Such circumstances may also include delays in obtaining access to property of third Parties. provided that the Respondent has made a good faith and timely effort to secure such access, and provided that the Respondent has requested assistance from the State in a timely manner. Finally, Force Majeure may include delays, beyond time periods estimated in the Work Plan, by the State in providing comments or other key documents, provided that the delay shortens the period allowed for the Respondent to comply with a deadline. Such circumstances shall not include increased cost of performance, changed economic circumstances, or normal inclement The Respondent shall bear the burden of proving by a weather. preponderance of the evidence that any failure to comply with the requirements of this Consent Order, the Work Plan or a Supplemental Work Plan is due to Force Majeure.

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B. The Respondent shall notify the State's Project Coordinator(s) orally, within 48 hours of the time Respondent learns of the circumstances, and shall, within seven (7) Days of oral notification to the State, notify the State in writing of the anticipated length and cause of delay, the measures taken and to be taken to prevent or minimize the delay, and the timetable by which the Respondent intends to implement those measures. Oral notification to the State must occur in no event more than 48 hours after Respondent or Respondent's contrac-

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tor(s) become aware of the occurrence or event causing the delay or failure in whole or in part. Oral notification shall be to the State Project Coordinator, Brian Antonioli, or his designee, at (406) 444-2821. After business hours, oral notification shall be to Brian Antonioli at (406) 442-6130, Karen Zackheim at (406) 449-6366 or Vic Andersen at (406) 458-5118. Failure to timely make the oral and written notifications to the State required by this paragraph B of any event for which Force Majeure is claimed shall waive the defense otherwise provided by this paragraph, but only for the event for which notice has not been made.

C. If the Respondent demonstrates to the State that the delay has been or will be caused by circumstances beyond the reasonable control of the Respondent and that it exercised due diligence to prevent the delay, the time for performance for that element of the Work Plan or Supplemental Work Plan shall be extended for a period equal to the delay. The extension of time may include any reasonable additional time necessary, not to exceed 15 Days, to mobilize manpower or machinery after the elimination of the Force Majeure event. This shall be accomplished through written notice or through an amendment to this Consent Order, as appropriate. Such an extension does not alter the schedule for performance or completion of other tasks required by the Work Plan or Supplemental Work Plans unless these are specifically altered by amendment of the Consent

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Order, or unless the Work on those other tasks depends on continued Work on the tasks delayed by the <u>Force Majeure</u> event. In the event further Work depends on the Work delayed by the <u>Force Majeure</u> event, the time for performance of the further Work shall be extended only for a period equal to that of the delay caused by the <u>Force Majeure</u> event and any reasonable additional time necessary, not to exceed fifteen (15) Days, to mobilize manpower or machinery.

- D. In the event that the State and Respondent cannot agree that any delay or failure has been or will be caused by circumstances beyond the reasonable control of the Respondent, or if there is no agreement on the length of the extension, the dispute shall be resolved in accordance with the provisions of Section XX of this Consent Order. If Respondent does not prevail in the dispute resolution pursuant to the dispute resolution process, any stipulated penalties which would apply by operation of Section XIX of this Consent Order shall apply during the term of the dispute resolution procedures, as provided for in Section XX.
- E. If the late receipt of State comments or documents results in Respondent's inability to comply with a deadline due to inclement weather conditions which substantially adversely affect the specific activity to be performed, the State and the Respondent agree to negotiate a schedule extension.

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### RECORD PRESERVATION AND EXCHANGE

The Respondent agrees that it shall preserve and make available to DHES, during the pendency of this Consent Order and for a period of six (6) years from the date of termination of this Consent Order, all records or documents in its possession or in the possession of its employees, agents, accountants, contractors, or attorneys that relate to the Work performed at the site pursuant to this Consent Order. Upon written request by the State, Respondent shall within twenty (20) Days make all such documents not exempt from disclosure by law available to the State. At the end of this six (6) year period, the Respondent may destroy any such records, but only after notifying DHES at least thirty (30) Days in advance and allowing DHES to inspect and copy any such records. At any time before the end of the six (6) year period, Respondent may discharge its obligations under this Section with respect to documents not exempt from disclosure by law by notifying the State in writing and providing the State with originals, if available, or unaltered reproductions of copies in possession of Respondent of all such reports and documents not already provided to the State and not exempt from disclosure by law. If unaltered reproductions of copies are provided, the custodian of the records shall certify that to the best of the custodian's knowledge, the copies were made contemporaneously with the

 original and that the copies are an accurate reproduction of the original. Thereafter, the records may be destroyed except that the Respondent must preserve all records and documents which the Respondent claims are exempt by law from disclosure for the entire six (6) year period referenced above.

B. All records, documents, raw data, and other information (including, but not limited to, field notes, daily ledgers, diaries, and memoranda), not otherwise exempt from disclosure by law, which are within the custody or control of Respondent or its Contractors relating to performance of any of the activities required by or undertaken pursuant to this Consent Order or plans established thereunder shall be available to DHES for inspection and copying upon notice to the Respondent as provided for herein.

#### XVIII.

### ADMISSIBILITY OF DATA

A. Except for objections as to relevance, the Parties hereby stipulate to and waive any objection to the admissibility into evidence of the results of any final data generated by the Respondent in the performance of the requirements of this Consent Order. For purposes of this Section, the term "final data generated" shall be interpreted to mean only analytical data that have been verified and approved by the State, or verified by the Respondent and approved by the State, pursuant

to the QAPP and the data assessment and data validation plans as being in full compliance with the quality assurance/quality control ("QA/QC") requirements of the QAPP, LAP, and SAPs in effect at the time the samples were collected. Additionally, except for objections as to relevance, the Parties stipulate to and waive any objection to the admissibility into evidence of final data generated and contained in, or referenced in, reports generated by any of the Parties or their Contractors pursuant to this Consent Order.

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If the State determines that analytical data are still usable in the RI/FS (and supporting documents), or in a natural resource damage context, for certain specific purposes, and QA/QC requirements that were in place at the time the data were gathered were not completely satisfied, or no QA/QC requirements existed, the State shall identify such data in a written report which describes the acceptable uses for the data, including any limitations on such uses and the reasons why they are still The State shall transmit the report to the Respondent usable. with a request that the Respondent stipulate to and waive any objection as to the admissibility into evidence (with the reservation described above) of the data if offered by the State as evidence in any enforcement proceeding. The Respondent shall respond in writing no later than thirty (30) days following receipt of the report to each issue and data point discussed by the State. The Respondent shall negotiate in good faith and, if

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waiver concerning the data. In this make he to Propose to mot agree to a written stipulation covering ternam data, the Respondent waives its rights to object to empenditures of the (either required of Respondent or made by the State) necessary for the collection of new data to riplace that which was not stipulated to; however, Respondent reserves any objections of may have as to the necessity or use of the data not apply to or the new data.

identifying data that loes not fully couply which OF (C requirements, describing acceptable uses for the in a, describing the reasons why it is still usual. And proposely a written stipulation and waiver of the right to raise evidentiary objections in any further enforcement properties by the School

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# STIPULATED PENALITES

A. In the event that the Despendent's larger for of the tasks set forth in this Section and called for in the Work Plus is not timely according to the schedule in Attachment 2, and such delay is not excused by operation of Duction AVI (Plus Majeure), or if the Respondent violates the following providious of this Consent Order, Dier may assess and Respondent shall pay, by tendering to DHES within ten (10) Days of the Respondent's

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receipt of a written demand from DHES for payment of such penalties, the sum(s) set forth below as stipulated penalties for each stipulated penalty event (i.e., violation, delay, refusal or failure). Stipulated penalties may be assessed for each Day during which such violation, delay, or failure occurs or continues. The demand shall specify the events giving rise to Respondent's asserted liability for stipulated penalties and the amount of such penalties.

1. For each Day of delay of the delivery of the draft and final sampling and analytical plans, the technology screening document, the Alternatives Screening Document (ASD report), the treatability study Work Plan, the draft RI report, the preliminary draft RI/FS report, the final draft RI/FS report, the draft final RI/FS report, and the final RI/FS report:

# Amount/Day

1-14 Days		\$ 3,000.00
15-30 Days	5	6,000.00
31 or more	Days	12,000.00

2. For failure to pay uncontested portion of reimbursable costs on time as specified in Section XXI:

# Amount/Day 1-14 Days \$ 1,000.00 15-30 Days 3,000.00 31 or more Days 6,000.00

3. For each instance of unintentional destruction of a document(s) in violation of Section XVII (Respondent shall bear the burden of establishing that any destruction was unintentional):

\$2,500 per instance

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## \$20,000 per instance

- B. DHES hereby finds that the provisions of this Section XIX are designed to protect the public health, welfare, safety and environment by achieving a prompt, complete and efficient assessment of the nature and extent of, and the development of, a plan for remediation of environmental degradation that may be present at the site. Stipulated penalties are also integral and essential to DHES's desire that the provisions of this Consent Order be, to the maximum extent achievable, self-executing and self-enforcing. All stipulated penalties not specifically rejected by the dispute resolution process shall be paid on or before the tenth (10th) Day following final resolution of the dispute pursuant to Section XX of this Consent Order.
- C. DHES may, in its discretion, impose a lesser penalty for minor violations. Any such decision to reduce stipulated penalties otherwise due pursuant to Section XIX.A. of this Consent Order shall be solely at DHES's discretion and shall not be subject to dispute resolution.
- D. Stipulated penalties shall begin to accrue as of the date of receipt by Respondent of written notice from the State specifying the violation of the Consent Order requirement and specifying the applicable penalty provision. The check for

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payment of the stipulated penalties shall be mailed within ten (10) days of Respondent's receipt of a written demand for Payment of stipulated penalties pursuant to this Section XIX to DHES shall be by check, made payable to the order of "State of Montana, Department of Health and Environmental Sciences" and tendered to:

Centralized Services Division Department of Health and Environmental Sciences Cogswell Building, Room C123 Helena, MT 59620

A copy of the transmittal letter and copy of the check shall be sent to the legal division at the following address:

Thomas L. Eggert, Esq. Department of Health and Environmental Sciences Legal Division, Room C216 Cogswell Building Helena, MT 59620

- Ιf Respondent fails or refuses to comply with the requirements and schedules of this Consent Order, the State may pursue any other remedy or sanction which may be available to the State because of the Respondent's failure or refusal to comply with any of the terms of this Consent Order, including an action for statutory penalties or for injunctive relief to enforce the terms of this Consent Order.
- Delay caused by formal dispute resolution requested by F. Respondent under Section XX in which DHES prevails shall not constitute "a circumstance beyond the control of the Respondent" for purposes of being excused from payment of stipulated penalties under Section XVI (Force Majeure).

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G. With respect to stipulated penalties, the State shall have the burden of proving non-compliance, except as specified in Section XIX.A.3., and the Respondent shall have the burden of proving the occurrence of a <u>Force Majeure</u> event.

XX.

### DISPUTE RESOLUTION

- In the event of any dispute pertaining to any of the requirements of this Consent Order, including the Work Plan and any Supplemental Work Plans, the Parties shall initiate an informal dispute resolution period not to exceed ten (10) Days. During this time period, representatives of the State and the Respondent shall meet informally to make a good faith attempt to resolve the dispute. At the conclusion of the informal dispute resolution process, DHES shall immediately notify the Respondent orally of its decision. The conclusion of the informal dispute resolution process shall be documented by DHES, and a notice shall be sent to Respondent within three (3) days of the documented conclusion. Any agreement between the Parties resolving a dispute shall be in writing and made a part of the administrative record. It is understood that neither the Director of the Department of Health and Environmental Sciences nor the Administrator of the Environmental Sciences Division will be present at these meetings.
  - B. In the event the dispute cannot be resolved through

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- this informal process, the Respondent may submit, on or before the tenth (10th) Day after conclusion of the informal dispute resolution process, a notice describing the nature of the dispute to the Administrator of the Environmental Sciences Division. This notice shall include all arguments and authority, both statutory and common law, and other facts and conclusions upon which the Respondent relies in support of its position.
- C. Any dispute or argument in support of a dispute not submitted to the Administrator of the Environmental Sciences Division within this ten-Day period shall be waived.
- Within ten (10) Days following receipt of D. aforementioned notice to the State, the Administrator of the Environmental Sciences Division shall schedule and hold a hearing addressing the subject matter of the dispute. Administrator of the Environmental Sciences Division or his duly designated representative shall attempt to schedule the hearing for a time which is convenient to the Parties. The Administrator shall notify in writing all Parties of the time and place of the hearing. This hearing shall take place before Administrator or his duly designated representative and shall be transcribed or recorded. At this hearing, all Parties may present their respective arguments and any evidence in Administrator of support of their position. The Environmental Sciences Division or his duly designated

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representative shall then consider all arguments and all evidence submitted and shall render a written decision upon the dispute within seven (7) Days of the hearing.

In the event the Respondent does not agree with the decision of the Administrator, it may appeal, in writing within five (5) Days of its receipt of the decision, to the Director of the Department of Health and Environmental Sciences. At this time, the Respondent can request and the Director may, at his discretion, schedule a meeting with the Respondent representatives of the State of Montana, at which time both Farties may make an oral presentation of their respective positions. It is to be understood, however, that this meeting is to be scheduled solely at the discretion of the Director and nothing in this Section entitles the Respondent to such a meeting as a matter of right. Only those arguments and positions originally presented at the hearing before Administrator will be considered at this appeal stage. Director shall render a written decision within seven (7) Days on the appeal following receipt of the request from the In the event the Director decides to hold a Respondent. meeting as provided above, the period for rendering a written decision may be extended for an additional seven (7) days; however, no stipulated penalties shall accrue during that period. The decision of the Director is final and shall be made part of the administrative record.

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F. In the event the Administrator or his duly designated representative fails to render a written decision within the time period stated in paragraph XX.D or the Director fails to render a written decision within the time period stated in paragraph XX.E, stipulated penalties shall be tolled for each day that such written decision is delayed.

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- Any stipulated penalties which arise out of or are the subject of the dispute resolution shall accrue during the dispute resolution period, unless tolled by paragraph XX.E or In the event this process ends in favor of the Respondent, no stipulated penalties shall be due for that particular violation. In the event this process ends in favor of the State, all penalties shall be immediately due and owing and shall be paid by Respondent in accord with the procedures set forth in paragraph XIX.D, unless either the Administrator or the Director finds that the Respondent's position was substantially justified. If it is found that the Respondent's position was substantially justified or that the Respondent acted in good faith in advancing an event as a Force Majeure, then the Administrator or the Director, as appropriate, may forgive part or all of the stipulated penalties incurred. a decision shall be solely at the discretion of the Administrator or Director.
- H. In the event the dispute resolution process ends in favor of the State, the Respondent understands and agrees to



reimburse the State for all costs incurred by the State because of the utilization of this resolution process. These costs shall include but are not limited to costs incurred by the State through the utilization of its own employees, attorneys, laboratories or scientific studies.

- I. The Respondent may not challenge provisions of this Consent Order to which it has already agreed by resorting to these dispute resolution procedures, except that a good faith dispute as to interpretation of the Consent Order shall be subject to such procedures. Implementation of these dispute resolution procedures shall not provide the basis for any schedule extension for any activities required in this Consent Order unless the Department of Health and Environmental Sciences agrees in writing to a scheduled extension.
- J. The Director of the Department of Health and Environmental Sciences shall have authority to suspend these dispute resolution procedures during any period in which an immediate action is required to prevent an imminent and substantial threat to public health, welfare or the environment. In the event of such a suspension, any stipulated penalties otherwise accruing shall be tolled until Respondent's receipt of notification of resumption of the dispute resolution process.

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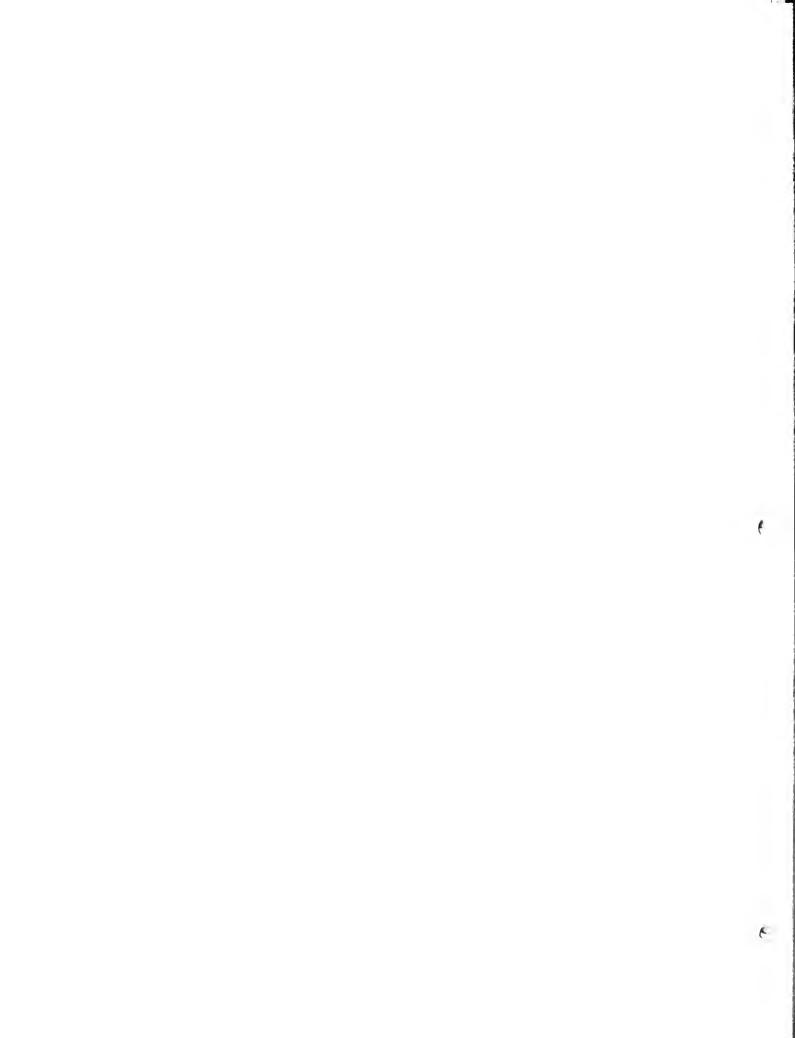
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## REIMBURSEMENT OF COSTS

The Respondent agrees to reimburse the State within forty-five (45) Days of receipt of an accounting which identifies all costs incurred by the Department of Health and Environmental Sciences and its contractor the Montana Bureau of Mines and Geology (hereafter DHES costs) prior to the effective date of this Consent Order. Such past costs include costs incurred in connection with the investigation of or response to Releases or threatened Releases from the Facility. accounting will include all costs incurred under, connection with, the drafting, negotiation and execution of this Consent Order. The Respondent agrees to pay all DHES costs, excluding those provided by U.S. EPA pursuant to cooperative agreements covering the Montana Pole NPL Site. Past DHES costs shall not exceed twenty-three thousand dollars (\$23,000). Payment of this amount by Respondent shall constitute a full and final settlement by Respondent and the State of State response costs at the Montana Pole site arising under CECRA and CERCLA prior to the effective date of this Consent Order.

On or after the beginning of each calendar quarter (i.e., January 1, April 1, July 1 and October 1) beginning on the effective date of this Consent Order, the State shall submit an accounting, including all applicable documentation, to the Respondent covering all remedial action costs incurred by the



State in connection with, or arising out of, ics response to Releases or threatened Releases from the Facility. " word, he State agrees not to seek, solely on the basis of this bonder t Order, cost recovery for any action defined as a traelial action by CERCLA Section 101(24), 42 U.S.C. § 9601(24). The Respondent agrees to and shall reimburse the State for all activities and oversight undertaken by the State or its Contractors while state consistent with the scope of the State ~ ' responsibilities under this Consent Order. accounting shall itemize State costs which have n by funding provided by the EPA through a coopera we also a and shall include, at a minimum, the following inform the state of the names and titles of State employees and retained ..... date(s), time and other direct charges; indirect charges State Contractor vouchers and/or invoices for Work professional feet State activities and oversight related to implementation of this Consent Order, except for any privilege in the analysis contained in such vouchers or invoices.

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- from the State, the Respondent shall, subject to its right to invoke the provisions in Paragraph E of this Section (A), reimburse the State for all such costs which have not been covered by funding provided by the EPA through a countrative agreement.
  - D. Payment to the State for its costs desmined in

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paragraphs A and B shall be by check and shall include a notation that the amount is a contribution to the Environmental Quality Protection Fund. The check shall be made payable to "State of Montana, Department of Health and Environmental Sciences" and shall be tendered to: Centralized Services Division, Montana Department of Health and Environmental Sciences, Cogswell Building, Room Cl23, Helena, Montana 59620. The contributions should be identified as being for the Montana Pole site. Copies of all payments to the State shall be provided at the time of such payment to: Thomas L. Eggert, Esq., Montana Department of Health and Environmental Sciences, Legal Division, Room C216, Cogswell Building, Helena, Montana 59620.

E. If the Respondent concludes that the State has made an accounting error, has not included the documentation described in paragraph B. above, or has included remedial action costs that are not recoverable under this Consent Order, it may contest payment by notifying the State of these conclusions, together with the facts and arguments upon which Respondent relies to support its conclusions, in writing within thirty (30) Days of receipt of the accounting. Any objection to the State's remedial action costs or supporting arguments not made within that time is waived. Following receipt of the Respondent's objections and supporting arguments, the State and the Respondent shall then have thirty (30) Days to resolve their

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differences. If agreement cannot be reached within the 30-Day period, the State reserves all rights it has to bring an action against Respondent under applicable federal or state law, to recoup all recoverable costs as set forth in the accounting, together with allowable interest and damages and penalties, not reimbursed by the Respondent. Respondent reserves its right to contest all such claims.

- F. If the Respondent contests payment of any of the State's remedial action costs included within an accounting submitted pursuant to paragraph B of this Section XXI and such costs are subsequently found to be due and owing the State, the Respondent may be liable to the State for damages in an amount of two (2) times the amount of the remedial action costs in dispute, plus two (2) times the costs incurred in bringing such suit, including attorneys' and expert witness fees and expenses.
- G. The State reserves all rights it has to recover any future costs incurred by the State in connection with investigation, remedial or response activities at the Facility pursuant to applicable federal and state law (including state common law).
- H. Upon payment of all past costs due the State as described in paragraph A. of this Section, the State releases Respondent from any further liability for costs incurred at the Facility prior to the effective date of this Consent Order. This paragraph shall in no way affect Respondent's liability for

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costs incurred subsequent to the effective date of this Consent Order, except for costs paid by the Respondent pursuant to this Section.

- I. For purposes of paragraphs A through E, inclusive, of this Section XXI, the term " remedial action cost" shall include:
  - 1. all costs of all activities included within the definitions of the terms "removal," "remodial action," and "response" in CERCLA Sections 101(23), (24) and (25), respectively, 42 U.S.C. §§ 9601(23), (24) and (25); which are consistent with the NCP; and
  - 2. all costs that fall within the definition of remedial action costs as defined in MCA § 75-10-701(15) which are consistent with the NCP.

#### LIXX.

#### NATURAL RESOURCE DAMAGE ASSESSMENT

The Parties agree that it is cost efficient and desirable to perform a natural resource damage assessment on the Facility prior to issuance of the record of decision. The Parties also agree that to the extent determined by the State, the Respondent should be allowed to participate in the natural resource damage assessment. Within sixty (60) days of the effective date of this Consent Order, the State agrees to provide the Respondent the opportunity to participate in a scoping meeting to discuss

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the proposed study, and the State will subsequently offer the Respondent the opportunity to conduct environmental data sampling that will be used in assessing the environmental injury to natural resources at the Facility.

The Respondent agrees to provide the State \$100,000 (one hundred thousand dollars) within thirty (30) days of the effective date of this Consent Order to perform a natural resource damage assessment at the Facility. Any money not expended by the State for the natural resource damage assessment shall be returned to the Respondent. The State shall include documentation, as described in paragraph XXI.B., regarding the expenditure of the funds provided for natural resource damage assessment in the quarterly accounting required by paragraph Validated environmental sampling data and natural XXI.B. resource damage assessment reports generated by the State or its contractor(s) for which the State seeks to recover costs under this Consent Order will be shared with the Respondent when available and no later than ten (10) Days in advance of the next quarterly meeting between the State and Respondent to be held pursuant to Section X.J. However, nothing in this Section shall require the State to make documents available to the Respondent which are otherwise privileged under State law and regulation. The amount provided under this Section shall not represent a cap natural resource expenditures for damage assessment on activities, but rather represents only the amount the Respondent

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is agreeing to provide pursuant to this Consent Order. Notwithstanding Section XXXI, the State reserves all of its rights to seek additional agreements from Respondent, or to recover funds expended on natural resource damage assessment activities that exceed the amount identified above provided pursuant to this Consent Order.

The Respondent agrees not to use the terms of this Consent Order, or the fact that money was provided for natural resource damage assessment activities pursuant to this Consent Order, as a defense to reimbursement of such costs. The Respondent's payment of funds for a natural resource damage assessment pursuant to the terms of this Consent Order is not an admission of liability for any such damages. The Respondent reserves its rights to deny liability for natural resource damages and to contest the activities and conclusions of the State in connection with the natural resource damage assessment as well as any additional assessment costs incurred by the State which exceed the amount identified above. This Section of this Consent Order shall not be admissible into evidence or otherwise used by the State in any proceeding other than a proceeding to enforce the terms of this Section.

XXIII.

### RESERVATION OF RIGHTS

A. The State retains the right to conduct other investiga-

tions and activities at the Facility. Subject to Section XXXI, nothing herein shall preclude the State from undertaking any additional enforcement actions it may deem necessary for any purpose, including the prevention or abatement of an imminent and substantial danger to health, welfare or the environment arising from site conditions. The State further retains all rights against Parties not privy to this Consent Order which may arise out of the facts on which this Consent Order is based. Notwithstanding compliance with the terms of this Consent Order, the Respondent is not released from liability for any actions for which the Respondent is otherwise liable under law.

- B. The State reserves the right to take appropriate enforcement action, including the right to seek injunctive relicf, monetary penalties, and all other appropriate relief available, pursuant to all applicable federal or state statutory and common law, for any violation, failure, or refusal to comply with this Consent Order. In addition, if the Respondent fails to remedy noncompliance with this Consent Order in a timely manner, the State may, after notification to the Respondent, initiate State- or EPA-funded response actions and may subsequently pursue cost recovery against Respondent, including actions for punitive damages.
- C. Nothing herein shall be construed to release the Respondent from any liability for failure of the Respondent to perform the required activities in accordance with the require-

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ments of this Consent Order, the Work Plan and Supplemental Work Plans. Except for claims covered by paragraph XXI.H. of this Consent Order, the Parties further expressly recognize that this Consent Order and the successful completion of activities required by this Consent Order and plans established thereunder do not represent satisfaction, waiver, release of, or covenant not to sue with regard to any claim of the State of Montana against the Respondent relating to the Facility (including claims to require the Respondent to undertake further response actions and claims to seek reimbursement of response costs incurred subsequent to the effective date of this Consent Order).

- D. Except as provided in Section XXIII.E., Respondent retains all rights to claim contribution as permitted by CECRA and CERCLA against any person, including the United States as the owner or operator of a facility releasing Hazardous or Deleterious Substances into the environment. Nothing in this Consent Order is intended to create any private causes of action in favor of any Persons not a Respondent.
- E. Based upon the assertions in Section III.I, Respondent agrees to waive contribution claims against the State which may arise out of or relate to its operation of the ground water system at the Facility described in paragraph III.I, provided that the State does not alter or modify the existing system without the concurrence of the Respondent.

F. Respondent denies any and all legal or equitable liability under any federal or state statute, regulation, ordinance or common law for any response costs, damages or other liability caused by or arising out of conditions at or arising from the Facility except as agreed to in Section VI. Except as provided in paragraph VI.C, XIX.A, XX.I, and this paragraph, Respondent specifically denies all Findings of Fact, Conclusions of Law and Determinations or any other allegations contained in this Consent Order and attachments thereto and such findings, conclusions of law and determinations shall not be used in any other proceeding by the State, other than proceedings to enforce this Consent Order or for any purpose in this proceeding except to establish jurisdiction. This Consent Order shall not create in any third party any rights which would not otherwise exist; nor shall this Order be relied upon by third parties to assert a cause of action or claim against Respondent. Nothing in this Consent Order shall preclude, however, the Respondent from using this Consent Order, or the fact of its entry, against any person for contribution or for recovery of costs expended in complying with this Consent Order, except as specifically waived in this Consent Order.

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G. No payment made by Respondent to pay for and implement the Work or any other activities required under this Consent Order, other than payment of stipulated penalties, shall be deemed to be a fine, penalty, or monetary sanction.

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PUBLIC COMMENT AND COMMUNITY RELATIONS

- A. Within ten (10) days of the date of signature of this Consent Order by the Respondent, the State shall announce the availability of this Consent Order to the public for review and comment. The State shall accept comments from the public for a minimum of thirty (30) Days after such announcement. At the end of the comment period, the State shall review all such comments and shall either:
  - 1. determine that this Consent Order should be made effective in its present form, in which case the Respondent shall be so notified in writing; or
  - determine that modification of this Consent Order 2. is necessary, in which case the Respondent will be informed in writing as to the nature of all changes deemed necessary Ιf the State. the Respondent agrees modifications, the Consent Order shall be so modified. the event that the Respondent does not agree to modifications required by the State as a result of public comment, the dispute as to the modification shall be submitted to the Chief of the Solid and Hazardous Waste Bureau for attempted resolution. No modification to this Consent Order shall be made except by agreement of the Parties. the Respondent does not. agree the event that to modifications required by the State as a result of public

comment, this Consent Order shall be null and void.

B. The Respondent shall cooperate with the State in providing FS information to the public. Upon the reasonable request of the State, the Respondent shall participate in the preparation of all appropriate information disseminated to the public and in public meetings which may be held or sponsored by the State to explain activities at the Montana Pole Site or concerning the FS process at the site.

XXV.

#### INDEMNIFICATION

A. The Respondent agrees to indemnify and save and hold harmless the State of Montana, its agencies, departments and employees acting in their capacity as regulatory agencies overseeing actions required by this Consent Order from any and all claims or causes of action arising from, or on account of, acts or omissions of the Respondent, its agents, or assigns, in carrying out the activities performed pursuant to this Consent Order.

B. For purposes of this Section only, the phrase "claims or causes of action" shall be deemed to include, but not be limited to all claims of officers, agents, and employees of the State for personal injury or property damage.

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## DISCLAIMERS

No Party shall be held as a Party to any contract entered into by another Party or its employees, agents, or Contractors in carrying out activities pursuant to this Consent Order. In addition, no Party shall be liable for any injuries or damages to Persons or property resulting from acts or omissions of another Party or its employees, agents or contractors in carrying out the activities pursuant to this Consent Order.

XXVII.

# NOTICE OF RIGHT TO CLAIM CONFIDENTIALITY OF BUSINESS INFORMATION

The Respondent may, if it desires, assert a business confidentiality privilege covering part or all of the information requested by this Consent Order. In order to assert the privilege, Respondent may either obtain a declaratory judgment from a court of competent jurisdiction or label the information as confidential pursuant to Section 16.44.1008 of the Administrative Rules of Montana. A label of confidentiality is subject to acceptance by the State. If no such designation or judgment accompanies the information when it is received by the State, the State may make it available to the public without further notice to the Respondent. This provision shall not limit any other claims of privilege by Respondent with respect

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to documents or information exempt from disclosure by law.

#### XXVIII.

#### ADMINISTRATIVE RECORD

- A. The State shall maintain the administrative record for the Facility, including documents generated as a result of this Consent Order, and the Respondent agrees to cooperate with the State in the preparation of the administrative record. The administrative record shall include, but not be limited to, all documents and data submitted by the Respondent pursuant to this Consent Order, all correspondence between the State and the Respondent relating to implementation of this Consent Order, and all documents described in EPA's Administrative Record Guidance (Attachment 3). The administrative record shall also include, but not be limited to, all correspondence between EPA and the State as provided under CERCLA, the NCP, and applicable EPA guidance.
- B. Notwithstanding the preceding sentence, EPA and the State reserve the right to protect from disclosure to the Respondent and the public any documents and communications protected from disclosure under applicable federal and state law. A list of confidential documents included in the administrative record shall be maintained in the administrative record available to the public.



#### XXIX.

## SUBSEQUENT MODIFICATION AND EFFECTIVE DATE

This Consent Order may be amended by the mutual agreement of the State in consultation with EPA and the Respondent.

Such amendments shall be in writing and shall be effective as of the date the amendment is signed by the State.

In the event the State determines that this Consent Order should be made effective in its present form following public comment, the effective date shall be the date on which Respondent receives written notice pursuant to Section XXIV. In the event that this Consent Order is modified by agreement of the State and the Respondent following public comment, the effective date of such modified Consent Order shall be the date on which it is signed by the State.

#### XXX.

#### CONTRIBUTION PROTECTION

Pursuant to Section 113(f)(2) of CERCLA, 42 U.S.C. \$9613(f)(2) and MCA 75-10-719(1), Respondent shall not be liable to other persons or entities for contribution claims regarding the Work required by or costs covered by this Consent Order.

#### XXXI.

#### COVENANT NOT TO SUE

So long as Respondent is performing the Work required by

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this Consent Order and is in compliance with this Consent Order, the State covenants not to sue, issue any order, or take other administrative or judicial action against, or assert any claim against Respondent with respect to the Work. However, nothing in this Section, or in this Consent Order, shall limit the State's ability to respond to an imminent and substantial endangerment to public health, welfare, safety, or the environment.

XXXII.

#### TERMINATION AND SATISFACTION

This Consent Order shall terminate when the Respondent certifies that all activities required under this Consent Order have been performed (the "Certification"), and the State, in consultation with EPA, has accepted the Certification. The State shall accept or reject the Certification by the Respondent within six (6) months of submittal of the Certification of the Respondent. Sections VI(C) and (D), XVII, XVIII, XXI, XXIII, XXV, XXIX, XXXI, and this Section shall survive termination of this Consent Order. If the State accepts the Certification, Respondent shall not be liable for any additional investigation of the Facility except, if, subsequent to the Certification:

1. conditions at the Facility, previously unknown to DHES, are discovered; or



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new information is received by DHES, in whole or in part, and DHES, based upon these previously unknown conditions or this new information determines that the Remedial Investigation/Feasibility Study is not adequate to choose a remedy which is protective of public health, welfare or safety, or the environment. In the event such a determination is made by DHES, a written opinion shall be prepared by DHES which sets forth all factual information, analytical data and previously unknown conditions upon which DHES may rely in determining that the RI/FS is not The written opinion shall be made part of the administrative record. This Section XXXII shall in no way affect the right of the State to respond to an imminent and substantial endangerment to public health, welfare, safety the environment by either ordering Respondent to undertake a removal action, or undertaking a removal action itself and seeking the recovery of costs expended from the Respondent.

XXXIII.

## AUTHORITY OF SIGNATORIES

Each of the signatories of this Consent Order states that he or she is fully authorized to enter into the terms and conditions of this Consent Order and to bind legally the Party represented by him or her to the Consent Order.

1	IT IS SO AGREED:	ARCO COAL COMPANY
2 3 4 5	4-23-90 Date	ARCO COAL COMPANY On behalf of the Atlantic Richfield Company
6	STATE OF COLORADO  COUNTY OF DENVER  Before me appeared	
9	ne is an authorized officer of	
12 13 14 15	(Notarial Seal)	Notary Public Residing at: 1 Co My commission expires: 2-15-93
16 17 18 19	IT IS SO ORDERED:	STATE OF MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES
<ul><li>20</li><li>21</li><li>22</li><li>23</li></ul>	April 25, 1990 Date of Issuance for	DONALD E. PIZZINI, Director Montana Department of Health and Environmental Sciences
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## SPECIFICATIONS FOR DEVELOPMENT OF A DATA MANAGEMENT PLAN

April 17, 1990

SECTION I DATA MANAGEMENT PLAN: A. A data management function will be developed which will insure the capability of communicating all data collected during the <insert activity name> activities identified in this plan to the Clark Fork Data System, while minimizing the need for restructuring, filtering, or augmenting the data to facilitate its integration into the data system. <CONTRACTOR/PRP> will prepare a Data Management Plan (DMP) for the project. The DMP will document how <CONTRACTOR/PRP> will record and manage data collected. Specifically, the DMP will detail compliance with Sections II through IV below.

B. <CONTRACTOR/PRP> will submit the DMP for review a minimum of <insert days> days prior to commencement of data collection and will modify the DMP as directed to insure compatibility with the Clark Fork Data System, and to provide for expeditious incorporation of data into the system.

SECTION II REPORTING FREQUENCY and TRANSFER FORMAT: A. [Insert wording here to set forth the schedule for submission of data (i.e. "Upon completion of the contract..."; "At the intervals specified..."; etc)], <CONTRACTOR/PRP> will submit accumulated data and accompanying documentation to [insert wording here to describe who is to receive data (i.e. SPO/RPM/Data System Administrator/GIS Officer).

- B. Except as noted under <u>SECTION B-4</u>, data will be submitted in machine readable format as follows:
- 1. High or low capacity  $3\frac{1}{2}$ " or  $5\frac{1}{4}$ " diskette. Data may be loaded to diskette using a PC DOS compatible backup utility with advance approval from the data system administrator.
- 2. Data cartridges compatible with Irwin Magnetic Systems tape drive model 265, loaded using Irwin Magnetic EzTape version 1.3 or fully compatible alternate.
- 3. Digital map coverage data to be communicated directly to the GIS may be provided on 9-Track computer tape @ 1600 or 3200 bpi.
- 4. [Insert special conditions here which would allow for data to be submitted in hard copy only.]

SECTION III DOCUMENTATION: A. The following documentation shall accompany all data submitted for inclusion in the data system:

- · Name of responsible agency or company
- · Contact name and address
- ullet Scope and extent of package with respect to applicable work plan and SAP
- Related QC information
- · Fully completed coding forms (unless data is provided in machine

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readable format)

- · Maps and explanations of all map data codes
- · Relevant field notes.
- · Method of data input
- $\boldsymbol{\cdot}$  Field definitions for fields not defined within the Clark Fork Data System
- Range of data values (min/max)
- · Target table and field names
- · Record length, number of records, field and record delimiter used
- B. The following additional documentation shall accompany all map data in digital format submitted for inclusion in the data system:
  - · Date of creation
  - Method of data input (e.g., digitized, scanned, etc.)
  - Specifications of equipment used (e.g., digitizer resolution: 1/1000")
  - Map source (e.g., USGS  $7\frac{1}{2}$  minute Topographic Quadrangle)
  - Map medium (e.g., paper, mylar, etc.)
  - Map Scale/Projection
  - · Registration tics used
  - · Processing and post-processing software used
  - · QA/QC procedures performed
  - · A copy of the source map used

SECTION IV FORMAT: A. Data submitted for inclusion in the data system shall be in a format as described in <ATTACHMENT A>, SPECIFICATIONS FOR SUBMISSION OF DATA FOR INCLUSION IN THE CLARK FORK DATA MANAGEMENT SYSTEM.

B. Data to be communicated directly to the GIS Officer as directed in SECTION II REPORTING shall be in a format as described in <ATTACHMENT B>, SPECIFICATIONS FOR SUBMISSION OF DATA FOR INCLUSION IN THE CLARK FORK GEOGRAPHIC INFORMATION SYSTEM.

SECTION V RESPONSIBILITIES and DATA FLOW: A. Data flow through each of the involved entities (EPA, DHES, PRPs, contractors, labs, data validators) and the data related responsibilities of each entity must be described.

SECTION VI DATA USE: A. The categorization of data as to possible use, based on the field and lab methodology, handling and documentation, must be described.

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#### ATTACHMENT A

## SPECIFICATIONS FOR SUBMISSION OF DATA FOR INCLUSION IN THE CLARK FORK DATA MANAGEMENT SYSTEM

April 17, 1990

The State of Montana Department of Health and Environmental Sciences has selected the Environmental Information System (EIS) for use in fulfilling the data management objectives with respect to the Upper Clark Fork River Superfund Sites. The Environmental Information System is a set of table, form, and program files developed by M. D. Swayne (Environmental Systems Corporation, Redmond, WA) that implements data, integrity and operator models. The EIS provides: a data model appropriate to managing a wide variety of environmentally related information, an implementation of this model using a modern data base engine in a personal computer environment, and an operator interface which facilitates routine data management tasks such as data entry, retrieval, reporting and integrity checking.

#### SYSTEM COMPATIBILITY DEFINITION

It is important that organizations collecting data destined for the Clark Fork Data System and/or desiring to use Clark Fork Data System data develop or use a compatible data management function.

Compatibility can be defined with respect to three levels:

- 1. Data model definition
- 2. Data model implementation
- 3. Operator interface

Compatibility at the data model <u>definition</u> level is required. Compatibility at the data model <u>implementation</u> and <u>operator interface</u> levels provides greater utility and efficiency but is not required.

#### EIS DATA MODEL DEFINITION COMPATIBILITY

Compatibility with respect to EIS data model definitions is required to ensure that data is defined in the same manner to ensure accurate, explicit and efficient data transfer. The following is a list of EIS data models together with compatibility requirements:

A. Conceptual model - Relational data base - Required.

The relational data model is the overall conceptual data structuring device for the EIS. The relational data model is a general mathematical model which can be used to organize any type of information. The relational model defines: domains and relations as object types; update, retrieval and viewing operators; and valid state, and transaction monitoring integrity rules. Other conceptual data models, such as hierarchical or

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network models, that use pointers to link records, are not directly compatible with the EIS. Data communication between relational and non-relational systems requires restructuring which can be tedious and time consuming.

B. Subject data models - One or more relational tables - Required.

The EIS defines subject environmental data models within the relational data model framework. Subject data is required to be organized and stored according to one or more of the following subject models. Data that are organized into different relational structures will require reorganization into the following before communication is possible.

- o Hydrologic Units USGS/WRC
- o Surface water reaches EPA/USGS
- o Political/Admin. areas USGS DLG code types
- o Public lands areas USGS DLG codes
- o Transportation USGS DLG code types
- o Utility lines USGS DLG code types
- o Cultural features/areas EIS ID codes
- o Environmental surveys EIS ID codes
- o Environmental stations EIS ID codes
- o Environmental samples EIS ID codes
- o Environmental field data EIS ID codes
- o Environmental lab data EIS ID codes
- o Laboratory QC EIS ID codes
- o Documents EIS ID codes
- o Coded field values EIS codes
- o Name (People) codes EIS ID codes
- o Organization codes EIS ID codes

Detailed specifications of each subject table can be obtained in the form of table (relation), form (data coding and screen display), and field (attribute) definitions. The evolving nature of the data system prohibits inclusion of the definitions herein; current information can be obtained from the data system administrator.

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C. Data integrity model - Required.

The data integrity model implements the integrity requirements of the relational model by defining: domain names for fields, valid domain values or ranges for fields, and field coding instructions. The most important aspect from a data communication aspect is that each system use the same domains from which attribute values are drawn. For example, if a field in each of two system has the same intended purpose but each uses coded values that are drawn from two different domains for which a one-to-one correspondence cannot be established by adding values to one of the domains, then it will be impossible to communicate data for this field between the systems and still maintain integrity. The evolving nature of the data system prohibits inclusion of the domains of acceptable values herein; current information can be obtained from the data system administrator.

Data integrity is systematically checked by the data system. However, it is desirable that data imported into the system have been previously checked to reduced the iterations required to establish integrity. For example, any data not found to have integrity will be flagged as unusable. Fields and field values that refer to domain names or domain values not defined require the data system administrator to contact the data originator to make changes. Data that does not conform to the integrity model will not pass the integrity checks cannot be made available for retrieval.

### DATA MODEL IMPLEMENTATION COMPATIBILITY

The EIS data model is implemented using a standard relational data base engine called Knowledgeman (KMan) v2.06 (Micro Data Base Systems, Inc., Lafayette, In), which runs on IBM PC compatible computers under PCDOS. It is <u>not</u> required that the data model be implemented using the EIS or Knowledgeman; however, absolute compatibility can be achieved through implementation using the EIS and Knowledgeman, both of which are available commercially.

It is required at this time that the data models be implemented in an operating system environment capable of importing and exporting PCDOS compatible relational table files in any of the following formats:

### REQUIRED EXPORT CAPABILITY

- o KMan table files, or
- o ASCII files (variable columns, any unique character delimiter, with one line corresponding to one record), or
- o DIF files, or
- o BASIC Compatible files, or

- o Unquoted ASCII files, or
- o SDF files (fixed columns, no delimiter, one line corresponds to a record), or
- o SYLK files (Multiplan format), or
- o WKS (Lotus 123 v1, v1A, or v2 binary files), or
- o dBASE III or dBASE IV table files.

### REQUIRED IMPORT CAPABILITY

- o KMan table files, or
- ASCII files (one field/expression value per line, strings quoted, and records delimited by blank lines), or
- o DIF (Data Interchange Format) files (see Technical note SATN-10, 1980, Software Arts, Inc.), or
- o BASIC files (Logicals equal 1 for TRUE and 0 for FALSE, strings are double quoted, numbers have leading blank for positive values and leading minus sign for negative values, data values are delimited by commas), or
- o Unquoted ASCII files (one field/expression value per line, strings unquoted, and records delimited by blank lines), or
- o ASCII files (variable columns, any unique character delimiter, with one line corresponding to one record), or
- o SDF files (fixed columns, no delimiter, one line corresponds to a record), or
- o SYLK files (strings enclosed in a matching pair of double quotes, numbers unchanged, login as unquoted string TRUE of FALSE), or
- o DBF files (dBASE III or IV format).

Examples of the described file formats are available from the data system administrator on request.

### OPERATOR INTERFACE COMPATIBILITY

The operator interface is implemented using the KMan data base facilities and procedural language. It is not required that a compatible operator interface be developed. However, an EIS data model compatible operator interface has been implemented using Knowledgeman, both of which are available commercially.

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### COMPATIBILITY TOOLS

The following reference material is available from the Clark Fork Data System Administrator:

- Coding Forms all data system tables
- General Form Coding Instructions
- Table Specific Form Coding Instructions
- Tables of acceptable values for all coded references

Compatibility can be established manually during the data collection phase by using the data system coding forms and instructions. These forms and instructions follow the data system structure and definitions, hence their use ensures relational and subject data model compatibility. The data on these forms can then be manually communicated to the data system and entered, if the volume of data is minimal and DHES agrees to perform the data entry.

If the data collection contract or order calls for communication of the data in machine readable format, the agency or organization collecting the data can either develop an implementation that conforms to the data system relational and subject data models or has the ability to convert data to this structure prior to communication.

#### ATTACHMENT B

# SPECIFICATIONS FOR SUBMISSION OF DATA FOR INCLUSION IN THE CLARK FORK GEOGRAPHIC INFORMATION SYSTEM

All digital data supplied to the Clark Fork GIS must be in the form of ASCII data files. It is preferred that spatial data and their attributes are transferred to the GIS as ARC/INFO map coverages. Other acceptable data formats are: USGS Digital Line Graph (DLG-3 Optional format); ERDAS GIS Files; MOSS; and DIME. Attribute codes used for the map coverages should conform to the specifications outlined above. Any exceptions should be documented.

Specific information for line or polygon data input may be obtained by contacting the Clark Fork GIS staff at the Montana State Library, 1515 East 6th Avenue, Helena, MT 59620. Contact Allan Cox, GIS Officer, at (406) 444-5357.

· Point data must consist of two separate ASCII files as defined below:

## File 1 will be the Data File. This data file will have:

- Spatial coordinates (X,Y) preferably expressed as Universal Transverse Mercator Coordinates in UTM Zone 12 (UTM Zone 13 in areas west of East Missoula). Other acceptable data coordinates are Latitude/Longitude expressed in decimal degrees, or State Plane Coordinates (SPC) with the SPC zone documented. If necessary, Anaconda Mineral Company Coordinates may be accepted. Point data located using the United States Public Land Survey System (township/range) are not acceptable.
- A field that contains a unique identification number for each point feature.
- $\cdot$  A field that documents the locational accuracy of the point data must be included with the data. For example, an entry of 50 would indicate the point locations are accurate to  $\pm$  50 feet. This field will be named ACCURACY and will be defined as an INTEGER type with an INPUT WIDTH of 5 and an OUTPUT WIDTH of 5.
- $\bullet$  The remaining fields in the <u>Data File</u> will be additional locational information or descriptions, and attribute data related to the point locations.

The ASCII <u>Data File</u> should contain one line of less than 80 characters for each data record. If it is not possible to fit the entire data record into a line of < 80 characters, than all fields must contain the same number of characters on each line. Every item or field in the file must be separated by some delimiter that does not appear within any of the fields, such as a pound sign (#) or bar (|). It is recommended that the bar (|) be used. Figure 1 shows two records from a database and what their ASCII records in the <u>Data File</u> would look like using the bar (|) as the delimiter.

	STATION NORTHSP EASTSP ELEVATION LOCATION
Ortginal	A-7 1884327 882376 3209 Int. of So. & Brooks A-12 1893224 884235 4795 Top of Mt. Jumbo
ASCTI	A-7 1884327 882376 3209 Int. of South & Brooks A-12 1893224 884235 4795 Top of Mt. Jumbo

Figure 1: Example of two data file records as they would appear in the ASCII Data File.

File 2 will be a <u>Data Definition File</u>. This file will contain the name for each field in the <u>Data File</u>, its type (integer, binary, character, etc.), the input width of the field, the output width of the field.

<u>Field Names and Definitions</u>: You **MUST** define **EVERY** item that appears in the <u>Data File</u>, and these definitions **MUST** appear in the <u>Data Definition File</u> in the same order as the items appear in the <u>Data File</u>. An item definition consist of:

- the item's NAME.
- the item's WIDTH in number of bytes used to store it,
- the OUTPUT WIDTH required to print the item's value,
- the TYPE of item, and
- the number of **DECIMAL PLACES** for type F (floating) and N (numeric) items.

Each of these entries must appear on a separate line. Figure 2 gives examples of items and their definitions.

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Sample Data Item Definitions						
Item Name	Input Width	Output Width	Type	Decimal Places		
Survey	7	7	С			
Station	6	6	С			
Latitude	10	10	С			
Longitude	11	11	С			
X-Coordinate	4	10	F	1		
Y-Coordinate	4	10	$\mathbf{F}$	1		
Date	8	8	D			
Depth	4	8.	F	3		
Accuracy	2	6	В			
Sphere	2	2	С			
Lead	4	3	F	3		
Cadmium	4	8	F	3		
Arsenic	4	8	F	3		

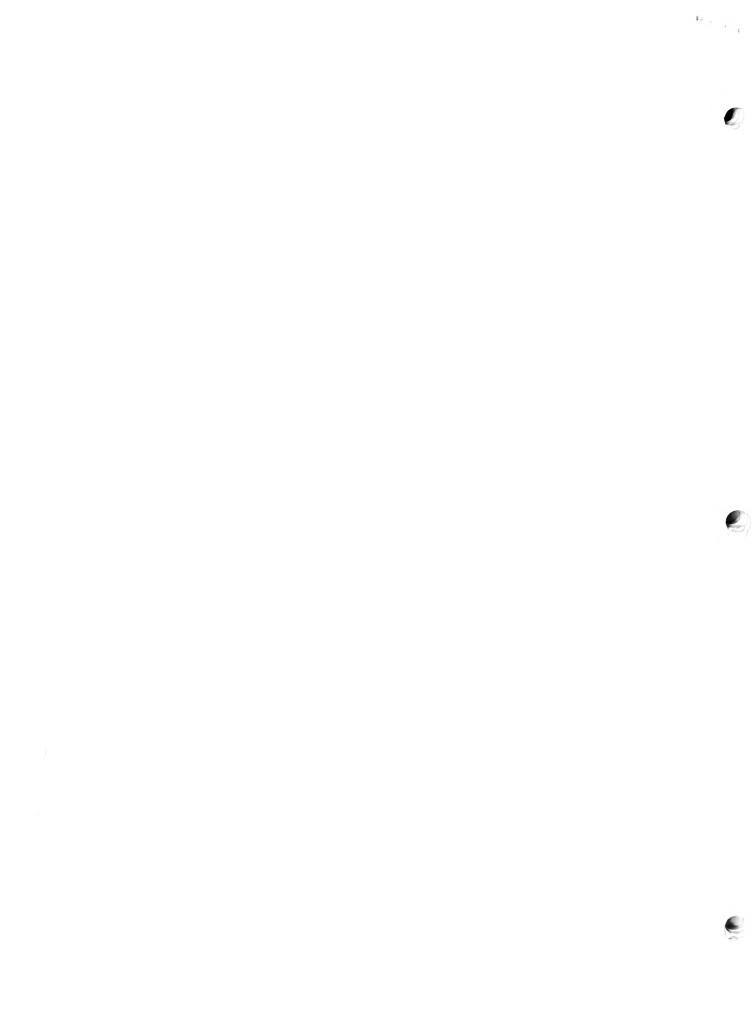
Figure 2: Examples of item names and definitions for to be used in the <u>Data</u> <u>Definition File</u>.

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Figure 3 illustrates the way the ASCII Data Definition File would look.

Sample ASCII	DATA	DEFINITION	FILE
Survey	·		
7 7			
Ċ			,
Station			ı
6			
6 C			
Latitude			
10 10			
C			
Longitude			
11 11			
C			
X-COORDINATE			
4 10			
F			
1			
Y-COORDINATE 4			
10			
F			
1 Date			
3			
8			
D Depth			
4			
8			
8 F 3			
J			

Figure 3: A sample Data Definition File.



#### ATTACHMENT 2

## DOCUMENT SCHEDULE

Supplemental Work Plan and SAP, if required, for Additional Work 30 days following meeting with DHES to discuss Supplemental Scope of Work for Additional Work within the scope of the original Work Plan as defined by the Consent Order, Section XI

Technology Screening
Document

90 days after the effective date of the Consent Order as defined by Section XXIX

Alternative Screening Document (ASD)

The ASD shall be submitted by the Respondent upon the concurrence of the following events, whichever occurs later: 120 days following Respondent's receipt of DHES final comments on the Technology Screening Document, and 120 days following a meeting between DHES and Respondent to review comments on the Technology Screening Document.

Final Treatibility
Work Plan

30 days following Respondent's receipt of DHES final comments on the ASD

Draft RI Report

60 days following DHES acceptance of Respondent's data validation reports for the Fall 1990 sampling event.

Final Draft RI Report

The Final Draft RI Report shall be submitted by Respondent upon the concurrence of the following events, whichever occurs later: 45 days following Respondent's receipt of DHES final comments on the Draft RI Report, and 45 days after meeting between DHES and Respondent to discuss comments received from DHES on draft RI report.

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Preliminary Draft RI/FS

The Preliminary Draft RI/FS shall be submitted upon the concurrence of the following events, whichever occurs later: 30 days after final approval of the Treatibility Work Report; 60 days following the data review meeting between the Respondent and DHES to discuss data generated from the fall 1990 sampling event; 60 days following DHES approval of the Final Draft RI Report; 60 days following the completion and DHES approval of any additional work performed by Respondent pursuant to a Supplemental Work Plan; 60 days after Respondent's receipt of DHES final endangerment assessment.

Final Draft RI/FS Report

The Final Draft RI/FS Report shall be submitted upon the concurrence of the following events, whichever occurs later: 45 days after Respondent's receipt of DHES final comments on Preliminary Draft RI/FS Report, and 45 days after a meeting between DHES and Respondent following receipt of DHES comments on the Preliminary Draft RI/FS.

Draft Final RI/FS Report

The Draft Final RI/FS shall be submitted upon the concurrence of the following events, whichever occurs later: 30 days after Respondent's receipt of DHES directions for revision and completion, and 30 days after a meeting between DHES and Respondent to discuss comments received by DHES during public comment period on the Final Draft RI/FS.

Final RI/FS Report

30 days after Respondent's receipt of DHES final comments on the Draft Final RI/FS

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## ATTACHMENT 3

#### GUIDANCE DOCUMENTS

- U.S. EPA. 40 CFR Part 300. National Oil and Hazardous Substances Contingency Plan, as revised effective April 9, 1990.
- U.S. EPA. October 1988. Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA. Interim Final. OSWER Directive No. 9255.3-01.
- U.S. EPA. December 1987. Compendium of Superfund Field Operations Methods. OSWER Directive 9355.0-14, EPA/540/P-87/00/a (also called Compendium).
- U.S. EPA. August 1988. CERCLA Compliance with Other Laws Manual. Draft. EPA/540/G-89/006.
- U.S. EPA. August 1989. CERCLA Compliance with Other Laws Manual, Part II. OSWER Directive 9234.1-02.
- U.S. EPA. August 1988. Guidance on Remedial Actions for Contaminated Ground Water at Superfund Sites. Draft. OSWER Directivé No. 9283/1-2.
- U.S. EPA. September 1988. Technology Screening Guide for Treatment of CERCLA Scils and Sludges. EPA/540/2-88/004.
- U.S. EPA. March 1987. Data Quality Objectives for Remedial Response Activities. OSWER Directives 9335.07A and 07B. (Also called DQO Guidance.) U.S. EPA, Washington, D.C.
- U.S. EPA. April 1985. Characterization of Hazardous Waste Sites A Methods Manual. Volume II. EPA/600/4-84/075.
- U.S. EA. July 1989. Risk Assessment Guidance for Superfund. Human Health Evaluation Manual. Part A. Interim Final. OSWER Directive No. 9285.701A.
- U.S. EPA. January 1986. Superfund Exposure Assessment Manual. Draft. OSWER Directive 9285.5-01. U.S. EPA, Washington, D.C.
- U.S. EPA. January 1989. Interim Final Guidance for Soil Ingestion Rates. OSWER Directive No. 9850.4.
- National Institute for Occupational Safety and Health. 1985. Guidance Manual for Superfund Activities. Volumes 1-9. U.S. Department of Health and Human Services, National Institute for Occupational Safety and Health, Cincinnati, Ohio.



- NIOSH/OSHA/USCG/USEPA. 1985. Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities. U.S. DHHS.
- U.S. EPA. August 1986. Applicability of RCRA Requirements to CERCLA Mining Waste Sites. OSWER Directive No. 9234.0-04.
- U.S. EPA. August 1988. Superfund Analytical Data Review and Oversight. OSWER Directive No. 9240.0-03.
- U.S. EPA. 1979. Methods for Chemical Analysis of Water and Wastes, EPA-600-4-79-02.
- U.S. EPA. 1983. Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans (QAMs-005/80) EPA-600/4-83-004.
- U.S. EPA. November 1986. Test Methods for Evaluating Solid Wastes, 3rd Ed. (SW-846).
- U.S. EPA. March 1989. Interim Guidance on Administrative Records for Selection of CERCLA Response Actions. OSWER Directive No. 9833.3A.

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#### ATTACHMENT 4

## STATE LAW AND REGULATION AUTHORITIES

#### STATUTORY AUTHORITIES

- The Comprehensive Environmental Cleanup and Responsibility Act (CECRA) codified at MCA §§ 75-10-701 et. seg.
- The Montana Hazardous Waste Management Act codified at MCA §§ 75-10-401 et. seq.
- The Solid Waste Management Act codified at MCA §§ 75-10-201 et. seg.
- The Montana Water Quality Act codified at MCA §§ 75-5-601 et. seq.
- The Occupational Health Act of Montana codified at MCA §§ 50-70-101 et. seq.
- The Antiquities Act codified at MCA §§ 22-3-421 et. seq.
- The Streambed Protection Act codified at MCA §§ 75-7-101 et. seg.
- The Floodplain and Floodway Management Act codified at MCA §§ 76-5-101 et. seg.

## REGULATORY AUTHORITIES

- The hazardous waste rules found at ARM parts 16.44.101 et. seq.
- The solid waste rules found at ARM parts 16.14.500 et. seq.
- The water quality rules found at ARM parts 16.20.601 et. seq.
- The water well contractor rules found at ARM parts 36.21.401 et. seq. and 36.21.635-.680 and 36.21.701-.703
- The groundwater protection rules found at ARM parts 16.20.1001 et. seq.
- The occupational health rules found at ARM parts 16.42.101 et. seq.
- The cultural resource rules found at ARM parts 12.8.501 et. seq.
- The floodplain management rules found at ARM parts 36.15.201 et. seq. and 36.15.601 et. seq.



